



The Last Word on Festo

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THE LAST WORD ON *FESTO*

I. INTRODUCTION

A Patent “is a property right; and like any property right, its boundaries should be clear.”¹ While a patent affords the inventor the opportunity to describe what he regards as his invention using his own terminology, a patent also must afford to the public adequate notice as to the objective meaning of the claims.² One would think that in such a sophisticated legal system as the United States offers, the rules of law would clearly resolve the clash between the needs of the public and the interests of inventors. More importantly, one would think that in a country concerned so much with protection of private property ownership and protection of the interested public, drawing up clear, predictable, and stable boundaries around patents should not be a problem. That clarity has not happened, however. Patent documents continue to be a source of controversy with continuous litigation from the very day they are granted. This controversy is prevalent in the two areas that really should not be a subject of any ambiguity, let alone serious problems, as they are areas that define ownership rights in a patent document and thus affect virtually everything else that follows the grant of a patent. These areas of controversy are claim construction³ and the doctrine of equivalents, along with its

1. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730 (2002).

2. *Id.* at 731 (“A patent holder should know what he owns, and the public should know what he does not. For this reason, the patent laws require inventors to describe their work in ‘full, clear, concise, and exact terms’”).

3. Before litigation begins in any patent infringement suit, claims in the patent at issue are construed by a judge during a Markman hearing. Then the case proceeds to trial where the jury, using the meaning of the claims from the Markman hearing, determines the issue of infringement. Because claim construction is a question of law, when the case is appealed from a district court,

limitation—prosecution history estoppel.⁴ However, unlike in claim construction where, at least with respect to controversial court opinions, the dust has somewhat settled in recent years,⁵ the doctrine of equivalents and prosecution history estoppel jurisprudence has remained tumultuous. The *Festo* saga,⁶ where litigation spanned over 19 years, provides the best example of this turmoil.

the Federal Circuit determines the meaning of the claims *de novo* without paying any deference to findings of the Markman hearing. If the Federal Circuit decides that the claims were not construed correctly during the Markman hearing, the case is sent back to the district court for a new trial on infringement, unless of course the Federal Circuit decides that the case would have come out the same way on infringement even with the new claim construction. Even though this procedure does not appear out of the ordinary, as many issues in different areas of law are reviewed *de novo* and, if overturned, sent back to the lower court for a new trial, the controversy in claim construction is caused by the extremely high reversal rate of lower court's claim constructions by the Federal Circuit. Various studies have put that reversal rate at least 34.5%. See Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 231 (2005) (reporting claim construction reversal of 34.5% at the district court level); Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1089 (2001) (reporting reversal of 36.6% of all cases when summary affirmances are taken into account). With such high reversal rate one can understand the uncertainty among practitioners. The high rate essentially means that neither the patentees, nor the interested public can truly ascertain the meaning of any patent until the Federal Circuit has had its say on the issue of claim construction.

4. Issues in the application of the doctrine of equivalents are the topic of this paper and will be addressed in upcoming sections.

5. Even though there have been calls to change the law with respect to the *de novo* review and afford deference to the findings of the district court judge, the last major court opinion on the issue occurred in 1998. See *Cybor Corp. v. FAS Techs Inc.*, 138 F.3d 1448 (Fed. Cir. 1998). Since *Cybor*, the focus on fixing the problem shifted from changing the standard of review to other avenues as well, such as fixing the problem at the district court level by enhancing district judges' knowledge and efficiency in these highly technical patent cases. See H.R. 34, 110th Cong. (2007) (providing for creation of a pilot program to enhance the expertise at the district court level).

6. When talking about litigation involved in this case in general terms (i.e. the entire lineage of cases), without reference to any particular court's decision, I will simply refer to it as "*Festo*." When referring to Festo Corporation, as a party in the lawsuit, I will refer to it as Festo (not italicized).

The lawsuit started as a multi-million dollar⁷ judgment for the plaintiff (Festo) in 1994. That district court decision was affirmed by the Federal Circuit in 1995 in *Festo I*,⁸ vacated by the Supreme Court in 1997 in *Festo II*,⁹ reversed by the Federal Circuit in 2000 in *Festo III*,¹⁰ and vacated again by the Supreme Court in 2002 in *Festo IV*.¹¹ On remand, first the Circuit, in *Festo V*,¹² and then the district court, in *Festo VI*,¹³ put the final daggers in Festo's case. More important than the ultimate fate of the litigants, however, were the rules of law pronounced by these courts, starting with the "complete bar" decision in *Festo III* and ending with the "*Festo* presumption" and three exceptions to that presumption articulated by the Supreme Court in *Festo IV*. These rules not only affected the outcome of the litigation, but set precedent for the whole patent bar to follow.

On July 2007, in *Festo VII*, the Federal Circuit took on the case again. This time, its decision did not depart from the guidelines set by the Supreme Court in *Festo IV* and continued a victorious streak for the proponents of a flexible, case-by-case approach with respect to the application of prosecution history estoppel as favored by the Supreme Court.¹⁴ That was the easy part. What the Federal Circuit struggled with was the application of the test

7. The total jury award for Festo was \$4,739,183 (\$4,322,456 in damages and \$416,727 in prejudgment interest). *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1374 (Fed. Cir. 2007).

8. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 72 F.3d 857 (Fed. Cir. 1995).

9. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 520 U.S. 1111 (1997).

10. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 234 F.3d 558 (Fed. Cir. 2000).

11. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002).

12. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 344 F.3d 1359 (Fed. Cir. 2003).

13. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 2005 WL 1398528 (D. Mass. June 10, 2005).

14. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 535 U.S. 722, 724 (2002) ("[W]e have consistently applied the doctrine in a flexible way, not a rigid one. We have considered what equivalents were surrendered during the prosecution of the patent, rather than imposing a complete bar that resorts to the very literalism the equivalents rule is designed to overcome.").

articulated in *Festo IV* with respect to determining whether a particular equivalent was foreseeable at the time of the narrowing amendment. This struggle was due to the unique facts in *Festo*, namely newly discovered properties of the prior art device in question which were unknown at the time of a narrowing amendment. Nevertheless, the majority seems to have reached a correct decision, specifically with respect to reiterating the timing of determining equivalency in foreseeability analysis.

Part II of this article is an overview of the most important concepts in patent infringement jurisprudence, including literal infringement and the doctrine of equivalents. Part III provides the factual background to the dispute in *Festo* and outlines the most important decisions in the saga, leading up to the most recent decision in *Festo VII*. Most importantly, it will present the Federal Circuit's "complete bar" ruling, handed down in *Festo III*, and the most recent Supreme Court's opinion in *Festo IV*, reversing that "complete bar" and reinstating the case-by-case approach. Part IV familiarizes the reader with the most important aspects of the majority and dissenting opinions of *Festo VII*. Part V presents the reason for the apparent split between the dissent and the majority. Part VI will predict the immediate impact *Festo VII* will have on future cases. Finally, part VII will reconcile public policy concerns with *Festo*.

This note analyzes only the "magnetizable sleeve" limitation of *Festo*'s patent. It does not talk about the "sealing ring" limitation, because the Federal Circuit, in its latest opinion, reached its holding based on the "magnetizable sleeve" limitation only and felt that it was unnecessary to dwell on the "sealing ring limitation."¹⁵

II. BACKGROUND

The boundaries, or "metes and bounds" of any patent document are established by the claims;¹⁶ the claims describe the "patentable elements of the invention."¹⁷ When infringement is alleged, the

15. *Festo*, 493 F.3d at 1382.

16. John R. Allison & Mark A. Lemley, *The (Unnoticed) Demise of the Doctrine of Equivalents*, 59 STAN. L. REV. 955, 958 (2007).

17. Jared R. Clark, *Promoting the Progress for Some: Why Independent*

first step in the analysis is to determine the scope of the patent claims.¹⁸ This is done by a judge, usually prior to a trial on the merits, in a specialized proceeding called a Markman hearing.¹⁹ Literal infringement of the claims occurs only when the accused device “includes each and every element” of the patented device.²⁰ “This requirement is known as the “all elements rule.”²¹ Patent infringement requires only that the accused device infringe a single patented claim.²² To avoid literal infringement, the accused device need only lack a single element of the claim in question.²³ However, even when a necessary claim limitation is not literally infringed, a patentee may still prove infringement through the application of the doctrine of equivalents.²⁴ Under the doctrine, infringement occurs where an element literally missing from the patented device is replaced with an equivalent element in the accused device.²⁵ The policy behind the doctrine of equivalents is to “prevent the imitation of an otherwise patented invention where insubstantial changes have been made to circumvent the patent protection” when literal infringement does not apply.²⁶ As such,

Inventors Are the First to Suffer as the Doctrine of Equivalents Fades Away, 52 S.D. L. Rev. 355, 359 (2007).

18. *Id.* at 364.

19. *Id.*

20. Allison & Lemley, *supra* note 14, at 958-59.

21. John M. Benassi et al., *Claim Construction and Proving Infringement: Impact of Phillips and Festo and Their Progeny*, 910 PLI/PAT 57, 91 (2007). Elements refer to limitations within claims of a patent. *Id.* Elements may be a single or a multiple limitation that makes a “single component of the claimed invention.” *Id.*

22. Clark, *supra* note 10, at 365-66.

23. *Id.* at 365.

24. Benassi, *supra* note 19, at 92.

25. *Id.*

26. Clark, *supra* note 10, at 366. That principle was voiced by the Supreme Court from the very first time that it addressed the doctrine. *See, e.g.,* Winans v. Denmead, 56 U.S. 330, 343 (1853) (stating that “[t]he exclusive right to the thing patented is not secured, if the public are at liberty to make substantial copies of it, varying its form or proportions”); Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605, 608 (1950) (explaining that “[t]he essence of the doctrine is that one may not practice a fraud on a patent”); Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki, 535 U.S. 722, 723 (2002) (recognizing that the doctrine of equivalents ensures appropriate incentives for innovation).

when analyzing the facts of the case, courts look for “circumstances [where] the change [in the new device] was so insubstantial that the . . . invocation of the doctrine of equivalents was justified.”²⁷

The doctrine of equivalents is a concept that is deeply entrenched in the United States patent system. The first Supreme Court decision that involved its express application was *Winans v. Denmead* in 1853.²⁸ In *Winans*, the plaintiff held a patent for making a railroad car for transporting coal and “all other heavy articles in lumps.”²⁹ The patent specified that the “upper part” of the railroad car to be “cylindrical, and the lower part in the form of a frustrum of a cone.”³⁰ The alleged infringer produced railroad cars that had octagonal and pyramidal shapes.³¹ In reversing the lower court finding of no infringement, which seemed to have been based on the fact that the accused device did not literally infringe the patent,³² the Supreme Court failed to articulate the specific test that is used to determine equivalency today, but held that the issue in these cases is whether the accused device involves a change of form or substance.³³ The Court explained:

It is generally true, when a patentee describes a machine, and then claims it as described, that he is understood to intend to claim, and does by law actually cover, not only the precise forms he has described, but all other forms which embody his

27. *Graver Tank*, 339 U.S. at 610.

28. *Winans*, 56 U.S. 330.

29. *Id.* at 339.

30. *Id.*

31. *Id.* at 332.

32. Specifically the lower court judge instructed the jury:

That while the patent is good for what [is] described therein, a conical body, in whole or in part, supported in any of the modes indicated for a mode of sustaining a conical body on a carriage or truck, and drawing the same, and to those principles which are due alone to conical vehicles, and not to rectilinear bodies, and it being admitted that the defendants' car was entirely rectilinear, that there was no infringement of the plaintiff's patent.

Id. at 336.

33. *Id.* at 343.

invention; it being a familiar rule that, to copy the principle or more of operation described, is an infringement, although such copy should be totally unlike the original in form or proportions.³⁴

In the years after *Winans*, courts developed two separate tests for finding equivalency: (1) the function/way/result test and (2) the insubstantial differences test.³⁵ The function/way/result test, also known as the “triple identity” test, focuses “on the function served by a particular claim element, the way that element serves that function, and the result thus obtained.”³⁶ The insubstantial differences test asks whether the changes between the accused element and the claim limitation in the patent are insubstantial.³⁷ Courts, however, are not required to use any particular test in any particular case or circumstance.³⁸ This is because, regardless of the particular test used, the essential inquiry in doctrine of equivalence cases always focuses on “whether the element in the accused device performs substantially the same function in

34. *Winans*, 56 U.S. at 342. The court reasoned that:

Where [the substance and the form of the invention] are separable; where the whole substance of the invention may be copied in a different form, it is the duty of courts and juries to look through the form for the substance of the invention—for that which entitled the inventor to his patent, and which the patent was designated to secure; where that is found, there is an infringement; and it is not a defence, [sic] that it is embodied in a form not described, and in terms claimed by the patentee.

Id. at 343.

35. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 (1997).

36. *Id.*

37. *Id.* at 40.

38. *See id.* The court reasoned that “linguistic framework . . . is less important than whether the test is probative of the essential inquiry.” *Id.* The issue in these cases should be whether “the accused product or process contain elements identical or equivalent to each claimed element of the patented invention” because “the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element.” *Id.*

substantially the same way to obtain the same result as the claim limitation.”³⁹ Furthermore, each of the tests has its own shortcomings and focusing strictly on one over the other would ultimately take away from the correct analysis of equivalency.⁴⁰

Prosecution history estoppel is a limitation to the doctrine of equivalents.⁴¹ It requires that “a patent be interpreted in light of the proceedings in the PTO during the application process.”⁴² Specifically, when applicable, it “precludes the patentee from reclaiming, via the doctrine of equivalents, subject matter relinquished during the prosecution.”⁴³ It thus holds the patentee responsible for arguments and amendments made during prosecution in order to obtain a patent.⁴⁴ Although much more could be written about prosecution history estoppel in this section, because the doctrine developed so many wrinkles solely because of *Festo*, further explanation of estoppel will be reserved for the remaining sections.

39. *Id.*; see also *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605 (1950); *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30 (1929); *Cantrell v. Wallick*, 117 U.S. 689 (1896); *Mach. Co. v. Murphy*, 97 U.S. 120 (1877); *AquaTex Indus., Inc. v. Techniche Solutions*, 419 F.3d 1374 (Fed. Cir. 2005).

40. The court explained “that, while the triple identity test may be suitable for analyzing mechanical devices, it often provides a poor framework for analyzing other products and processes. *Warner-Jenkinson*, 520 U.S. at 39-40. On the other hand, the insubstantial differences test offers little additional guidance as to what might render any given difference ‘insubstantial.’” *Id.* at 40.

41. Benassi, *supra* note 14, at 93. There are three other important limitations to the doctrine of equivalents: (1) “dedication to the public domain” limitation which dedicates to public “any technological equivalent that was disclosed but not claimed in the application”; and (2) limitation that prevents the patentee from using the doctrine of equivalents to recapture what is a part of prior art.

42. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733 (2002).

43. Benassi, *supra* note 14, at 94.

44. *Id.*

III. *FESTO*—THE BEGINNINGS, THE MIDDLE, AND THE LATEST SUPREME COURT DECISION

A. Factual background

In 1981, Dr. Stoll (the predecessor to Festo) filed a patent application for “Magnetically Coupled Arrangement for a Driving and a Driven Member.”⁴⁵ The application was for a “small gap magnetically coupled rodless cylinder.”⁴⁶ The invention disclosed “a sleeve” that surrounded the “outside of the driven member and [was] the casing that encloses the magnets.”⁴⁷ Independent claim⁴⁸ 1 did not contain any information regarding a sleeve; however, dependent claim⁴⁹ 8 claimed such sleeve was made out of a

45. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1371 (Fed. Cir. 2007).

46. *Id.*

A magnetically coupled cylinder is a previously known device that contains a piston that is forced through a cylinder and is magnetically coupled to a driven member or driven assembly (which is attached to a carriage that can move goods Thus when the piston moves through the cylinder, the magnetic force moves the driven member, which moves the attached carriage The invention claimed in the 125 patent is a “small gap” magnetically coupled rodless cylinder, meaning that the gap between the piston as the driven member is kept as small as possible so that the magnetic coupling force is particularly strong.

Id.

47. *Id.* The patented device also contained sealing rings at either end of the piston. *Id.* The sealing rings also “wipe impurities from the inside of the cylinder.” *Id.*

48. “Independent claims are those that can be read and interpreted without looking to other claims; they are claims that stand on their own accord.” Clark, *supra* note 10, at 362.

49. A dependent claim cannot stand on its own and must incorporate claim(s) to which it refers. It must also add an additional limitation to the subject matter that is claimed. This requirement is encoded in the statute which reads: “[A] claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed.” 35 U.S.C. § 112 (2006). “A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.” *Id.*

“magnetizable material.”⁵⁰ Dr. Stoll’s application was rejected initially, partly because the examiner found that claims 4-12 were in an improper multiple dependent form in violation of Section 112 of the Patent Act.⁵¹ In response to the rejection, Dr. Stoll submitted two prior art “large gap” rodless cylinder patents, one of which disclosed a “sleeve made out of non-magnetic material.”⁵² He then submitted a short statement distinguishing the German patents from his application.⁵³ He amended further his own application by substituting independent claim 1 and dependent claims 4 and 8 with a new independent claim 1.⁵⁴ His new claim contained a limitation that required that the “cylindrical sleeve [be] made of a magnetizable material.”⁵⁵ Dr. Stoll did not, however, explain the purpose of the amendment, he did not explain the reasoning behind the amendment and he also did not mention anything about the sleeve element in his response.⁵⁶ The examiner allowed these amended claims.⁵⁷

50. *Festo*, 493 F.3d at 1372.

51. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, No. Civ. A. 88-1814-MA, 1993 WL 1510657, at *12 (D. Mass. Apr. 27, 1993). Section 112 contains the guidelines in regards to multiple dependent claims:

A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of the particular claim in relation to which it is being considered.

35 U.S.C. § 112. Although the court did not explain specifically the exact reasons for impropriety, from the limited information provided, it seems that claim 4, which was a multiple dependent claim, improperly served as basis for claim 8, which was another multiple dependent claims. One would have to analyze the original patent application to determine what was exactly wrong with the other claims.

52. *Festo*, 493 F.3d at 1373.

53. *Festo*, 1993 WL 1510657, at *12.

54. *Festo*, 493 F.3d at 1373.

55. *Id.* at 1374. The new claim also replaced “sealing rings” with “first sealing rings located axially outside said guide rings.” *Id.*

56. *Id.*

57. *Id.* These amendments were allowed with minor changes made by the examiner. *Id.* The court omitted discussion of these changes stating that “they

Respondent, Shoketsu Kinzoku Kogyo Kabushiki Co. (SMC) also produced “a magnetically coupled rodless cylinder that contained a “driven member surrounded by a sleeve.”⁵⁸ The SMC device differed from Dr. Stoll’s patented device because SMC’s device was made of non-magnetizable material, specifically aluminum alloy.⁵⁹

In August 1988, Festo sued SMC for infringement of its patent (the ‘125 Patent).⁶⁰ As an initial matter, the parties conceded that because two of the claim limitations⁶¹ required by the ‘125 patent were not present in SMC’s device, SMC’s device did not literally infringe Festo’s patent.⁶² Nonetheless, Festo argued in its motion for summary judgment that SMC’s device infringed under the doctrine of equivalents.⁶³ SMC contended that there was no infringement through the doctrine of equivalents because the triple identity test was not satisfied.⁶⁴ SMC also argued that prosecution history estoppel precluded the application of the doctrine of equivalents in this case.⁶⁵

The District Court for the District of Massachusetts held that prosecution history estoppel did not apply; therefore, application of the doctrine of equivalents was not precluded.⁶⁶ The case went

[were] not pertinent [to the case].” *Id.*

58. *Id.*

59. *Id.* There was another difference between the devices. Namely, respondent’s device contained two guide rings, as opposed to only one in petitioner’s patented device. *Id.*

60. *Festo*, 493 F.3d at 1374.

61. These two claim limitations in question were: (1) sleeve made of an magnetizable material, and (2) first sealing rings located axially outside the guide rings. *See id.*

62. *Id.*

63. *Id.*

64. *Id.*

65. *Id.* Both sides made these arguments on motions for summary judgment. *See id.*

66. *Festo*, 493 F.3d at 1374 (citing *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, No. Civ. A. 88-1814-MA, 1994 WL 1743984, at *4 (D. Mass. Feb. 3, 1994)). The district court specifically found that “there [was] nothing in the record . . . to indicate that the limitation of a magnetizable sleeve was necessary to distinguish the claimed invention over prior art” and thus the prosecution history estoppel should not apply.” *Id.* (quoting *Festo*, 1994 WL 1743984, at *4).

to trial and a jury found that SMC infringed Festo's patent under the doctrine of equivalents.⁶⁷ The Federal Circuit affirmed in *Festo I*.⁶⁸ In *Festo II* the Supreme Court granted certiorari, vacated, and remanded for the Federal Circuit to consider *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*,⁶⁹ and to apply that decision to the facts of *Festo*.⁷⁰ In *Warner-Jenkinson*, the Supreme Court held that only amendments made during prosecution history related to patentability trigger the application of prosecution history estoppel.⁷¹ The Court, however, placed the burden on the patentee to establish that the amendment, when present, was not made for reasons of patentability.⁷² Where the patentee fails to meet this burden, the court will "presume that the purpose behind the required amendment is such that prosecution history estoppel would apply."⁷³ This presumption was important in the context of the Festo patent because Dr. Stoll did not provide any reasons for amending the claims in his application.⁷⁴

B. Festo III—The "Complete Bar"

On remand, after considering the issues from *Warner-Jenkinson*, an *en banc* panel of the Federal Circuit held that for purposes of prosecution history estoppel, a "'substantial reason related to patentability' is not limited to overcoming prior art, but includes

67. *Id.*

68. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 72 F.3d 857 (Fed. Cir. 1995). The Federal Circuit held that there was no reversible error on the district court level. *Id.* at 864. The court reasoned that "[t]aking note of the substantial evidence of technologic identity of function, way, and result in the circumstances of actual use wherein the leakage of magnetic flux from the cylinder was small, and the disputed facts underlying the issue of estoppel, we conclude that the judgment of infringement of the Stoll patent must be sustained." *Id.*

69. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997).

70. *Shoketsu Kinzoku Kogyo Kabushiki Co. v. Festo Corp.*, 520 U.S. 1111 (1997).

71. *Warner-Jenkinson*, 520 U.S. at 19.

72. *Id.*

73. *Id.*

74. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1374 (Fed. Cir. 2007).

other reasons related to the statutory requirements for a patent.”⁷⁵ Hence, prosecution history estoppel could be used with Dr. Stoll’s Section 112 amendments and as a result, the court reversed the judgment of infringement.⁷⁶ More importantly the court held that when such an amendment is made by the patentee, the amendment creates a “complete bar” for equivalents—the patentee gives up all of the equivalents with respect to the subject matter narrowed on amendment.⁷⁷

*C. Festo IV—The Supreme Court’s Response to the
“Complete Bar”*

Festo petitioned to the Supreme Court for review of the *Festo III* decision. The petition was granted and on May 28, 2002, the Supreme Court issued its second opinion in the case.⁷⁸ The Court again vacated and remanded the Federal Circuit’s decision.⁷⁹ It agreed with the Federal Circuit that prosecution history estoppel was not limited to narrowing amendments in response to prior art.⁸⁰ Hence, estoppel may be triggered by “any amendment that narrows a claim to comply with the Patent Act.”⁸¹ The Court reasoned that, at least in instances where absence of an amendment would render the claimed subject matter unpatentable, the patentee

75. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 563 (Fed. Cir. 2000).

76. *Id.* at 591.

77. *Id.* at 569. In addition, the Federal Circuit held that “voluntary amendments are treated the same as other amendments for purposes of prosecution history estoppel” and that unexplained amendments are not entitled to any range of equivalents. *Id.* at 569, 578.

78. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002).

79. *Id.* at 742.

80. *Id.* at 735-36.

81. *Id.* at 730. The Court listed some of the requirements of the Patent act that had to be satisfied before a patent could be granted. *See id.* at 736. They included the requirements of sections 101-103 requiring that the subject matter claimed be useful, novel and not obvious. *Id.* The Court also stated that the patent application must also conform to section 112 of the Patent Act, that is “it must describe, enable, and set forth the best mode of carrying out the invention. *Id.* Furthermore, specification must include what is claimed. *Id.*

should not be able to recapture what had been given up.⁸² The Court, however, did not articulate a complete list of amendments that could be related to patentability and thus trigger the application of prosecution history estoppel.⁸³ Furthermore, the Court explained that even some amendments made for reasons other than to comply with the Patent Act might still trigger estoppel.⁸⁴ In the end, the Court held that Festo's Section 112 amendments were related to patentability and therefore triggered the application of prosecution history estoppel.⁸⁵ Most importantly, the Court held that the owner of a patent does not have a defense from prosecution history estoppel where "the original application once embraced the purported equivalent but the patentee narrowed his claims to obtain the patent or to protect its validity."⁸⁶ This was particularly important to the case at bar because Festo's patent had included an SMC-type of sleeve before the narrowing amendment.⁸⁷

The Supreme Court, however, did not uphold the second part of *Festo III*, regarding the "complete bar" of any equivalents in situations where claims are narrowed.⁸⁸ Specifically, the Court held that "there is no reason why a narrowing amendment should

82. *Id.* at 735.

83. *Id.*

84. *Festo*, 535 U.S. at 735. The court explained that in these situations, "prosecution history may rebut the inference that a thing not described was indescribable. *Id.* at 736.

85. *Id.* at 737. The court specifically held that such an amendment is in fact "necessary and narrows" the scope of the claims "even if only for the purpose of better description," because that is one of the conditions for patentability. *Id.*

86. *Id.* at 734. The court reasoned that doctrine of equivalents is based on "language's inability to capture the essence of the innovation." *Id.* When the original, or earlier application, however, described the very same element that was later narrowed, and is now sought to be reclaimed through the doctrine, the doctrine is undercut because there was no such proven inability to describe. *Id.*

87. This is because the original, independent claim 1 did not contain a limitation with respect to the type of sleeve that was required for the patented device. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1372 (Fed. Cir. 2007).

88. *Festo*, 535 U.S. at 737. In its decision the Federal Circuit conceded that its holding was a departure from precedent but stated that a "flexible bar rule is unworkable because it leads to excessive uncertainty and burdens legitimate innovation." *Id.*

be deemed to relinquish equivalents unforeseeable at the time of the amendment and beyond a fair interpretation of what was surrendered.”⁸⁹ The Court emphasized that its precedent has always applied the doctrine in a flexible fashion and then cautioned overturning well grounded principles and “disrupt[ing] the settled expectations of the inventing community.”⁹⁰ To resolve the issue, the Court reiterated the holding from *Warner-Jenkinson* and held that the balance between the interests advanced by the Federal Circuit’s complete bar—the interest in certainty—and the interests advanced by the flexible bar—the legitimate expectations of inventors—is resolved best with a flexible approach by placing the burden on the patentee to show that by amending the claims he did not surrender the equivalent at issue.⁹¹ In the absence of such explanation, the court will presume that the amendment was made in order to make a particular claim patentable, and “prosecution history [estoppel] would bar the application of the doctrine of equivalents.”⁹² The court, however, emphasized that as with any presumption, the patentee may rebut it.⁹³ Thus, the Court expressly overruled the complete bar applied by *Festo III*. Specifically, the presumption may be rebutted where:

The equivalent may have been unforeseeable at the time of the application; the rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question; or there may be some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question.⁹⁴

In other words, a patentee must show that “the amendment cannot reasonably be viewed as surrendering a particular

89. *Id.* at 738.

90. *Id.* at 739. Specifically, the Court was concerned with the “legitimate expectations of investors in their property”. *Id.*

91. *Id.*

92. *Id.* at 739-40.

93. *Id.* at 740-41.

94. *Festo*, 535 U.S. at 740-41.

equivalent.”⁹⁵

On remand, in *Festo V*, the Federal Circuit first stated that in a determination of whether a patentee rebutted the presumption, many relevant factors can be present; thus, “rebuttal criteria” should be analyzed on a “case by case basis.”⁹⁶ It held, however, that Festo could not rebut the presumption with respect to the “tangential relation” or “some other reason” exceptions advanced by the Supreme Court.⁹⁷ With respect to whether Festo could prove that, at the time of the amendments, the equivalents were unforeseeable, the Federal Circuit remanded the case to the district court for a determination on that issue.⁹⁸

After a two-day bench trial, in *Festo VI*, the district court held

95. *Id.* at 740. Thus, “[t]he patentee must show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed [a particular] equivalent.” *Id.* at 741.

96. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1368-69 (Fed. Cir. 2003). Writing for the court, Judge Lourie stated that “[b]ecause we cannot anticipate all of the circumstances in which a patentee might rebut the presumption of surrender, we believe that discussion of the relevant factors encompassed by each of the rebuttal criteria is best left to development on a case-by-case basis. *Id.* at 1368.

97. *Id.* at 1363-64. “[The tangential relation criterion] asks whether the reason for the narrowing amendment was peripheral, or not directly relevant.” *Id.* at 1369. Thus, when an equivalent is present in the prior art and the patentee makes an amendment to avoid that prior art, he will not be able to rebut the presumption using “tangential relation” criterion, because it is clear that in such circumstances amendment is “central to allowance of the claim.” *Id.* On the other hand, “other reason” criterion determines whether there may have been “some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question . . . such as the shortcomings of the language.” *Id.* at 1370. Here, similarly, patentee will not rebut the presumption if the equivalent was present in the prior art because “there can be no other reason the patentee could not have described the substitute in question.” *Id.* at 1370.

98. *Id.* at 1364. Before reaching any decisions on the substantive issues in the case, the Federal Circuit reiterated what parts of its vacated decision remained alive. *See id.* at 1366. Specifically the court reiterated that: (1) “a ‘voluntary’ amendment may give rise to prosecution history estoppel”; (2) “a narrowing amendment is made for substantial reasons related to patentability when the record does not reveal the reason for the amendment”; and (3) “a patentee’s failure to overcome the *Warner-Jenkinson* presumption gives rise to the new *Festo* presumption of surrender.” *Id.*

for SMC.⁹⁹ It found that the equivalent in question, SMC's device, "would have been foreseeable to one of ordinary skill in the art at the time . . . the narrowing amendments [were made]."¹⁰⁰

IV. *FESTO VII*—THE FEDERAL CIRCUIT'S LAST WORD ON *FESTO*

A. Festo's Argument

Festo appealed the district court's decision.¹⁰¹ The sole issue on appeal was whether Festo could prove that SMC's device was unforeseeable to one of ordinary skill in the art at the time when Dr. Stoll made his amendments.¹⁰² Festo's main argument was that the determination of foreseeability of an equivalent must be made using the "function/way/result" test at the time of the amendment.¹⁰³ Festo urged the court to adopt its foreseeability test which turned on "whether the proven equivalent would have been foreseeable to a person of ordinary skill in the art to accomplish the claimed invention, i.e., perform the same function in substantially the same way to achieve the same result, looking only at the information available at the time of the amendment."¹⁰⁴ Festo concluded that under this test, the equivalent in question—the aluminum sleeve—was not foreseeable, because one of ordinary skill in the art did not know that an aluminum sleeve could perform the "magnetic shielding function."¹⁰⁵ Thus, Festo argued, prosecution history estoppel did not preclude application of the doctrine of equivalents to the claim at issue and that "it should be able to capture the unclaimed equivalents."¹⁰⁶

99. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, No. Civ. A. 88-1814-PBS, 2005 WL 1398528, at *9 (D. Mass. June 10, 2005).

100. *Id.* at *1.

101. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1376 (Fed. Cir. 2007).

102. *Id.* at 1377.

103. *Id.* at 1378.

104. *Id.* at 1378-79.

105. *Id.* at 1379.

106. *Id.*

B. Majority Opinion

The Federal Circuit, in a split panel decision, disagreed.¹⁰⁷ It explicitly stated that determination of foreseeability does not involve the application of the function/way/result test or the insubstantial differences test.¹⁰⁸ The court held that “an alternative is foreseeable if it is disclosed in the pertinent prior art in the field of the invention.”¹⁰⁹ The court offered several explanations for its holding. First, it stated that precedent, including the Supreme Court’s opinion in *Festo IV*, was consistent with its ruling.¹¹⁰ In the court’s mind, “[t]he patentee, as the author of the claim language, may be expected to draft claims encompassing readily known equivalents.”¹¹¹ Therefore, it follows that “if the alleged equivalent were known in the prior art in the field of the invention, it certainly should have been foreseeable at the time of the amendment.”¹¹²

Furthermore, the court reasoned that the function/way/result test aids in determination whether the doctrine of equivalents applies and not whether an equivalent is foreseeable under the doctrine of prosecution history estoppel.¹¹³ The court explained that acceptance of *Festo*’s test would lead to the disappearance of prosecution history estoppel as a viable defense to competitors in most cases.¹¹⁴ The doctrine would only apply if the applicant, when amending the claims of his invention, “was aware or should have been aware” that the broader feature would be an equivalent to the one in the amended claims.¹¹⁵ Thus, the only instance when a competitor could assert a defense of prosecution history estoppel under such a regime would be when “the alternative was

107. *Festo*, 493 F.3d at 1379.

108. *Id.*

109. *Id.*

110. *Id.* at 1380.

111. *Id.* (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 740 (2002)).

112. *Id.* (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1369 (Fed. Cir. 2003) (emphasis omitted)).

113. *Festo*, 493 F.3d at 1380.

114. *Id.*

115. *Id.*

inadvertently omitted and was a candidate for a reissue patent.”¹¹⁶ Furthermore, application of the function/way/result test would lead to inconsistent arguments with respect to equivalency at different stages of the proceedings.¹¹⁷

Most importantly, the court thought the test incorrectly invited determination of equivalency for the purposes of determining whether prosecution history estoppel applies after, rather than before, the narrowing amendment.¹¹⁸ The court stated that when the alternative is known in the pertinent art before the amendment, “the applicant should not be able to recapture it simply by establishing that a property of the equivalent—irrelevant to the broader claim before the amendment—was relevant but unknown with respect to the objectives of the narrower amended claim.”¹¹⁹ The Federal Circuit surmised that it was not unfair to charge the applicant with reasonably knowing that such equivalents were present in the prior art and with the risk of surrendering this alternative when a narrowed claim does not include that equivalent.¹²⁰ Thus, the court held that an equivalent is foreseeable “even if the suitability of the alternative for the particular purposes defined by the amended claim scope were unknown.”¹²¹

By applying this reasoning to the facts of the case, the court held that the use of a non-magnetizable sleeve “was foreseeable under

116. *Id.* at 1381.

117. *Id.* The court explained that, during the infringement stage, a patentee would first argue that the triple identity test was satisfied to prove infringement under the doctrine of equivalents and then completely reverse his course by claiming that the allegedly infringing device was not foreseeable to the one skilled in the art at the time of the amendment because it did not satisfy the triple identity test. *Id.*

118. *Id.*

119. *Festo*, 493 F.3d at 1381. The court explained this using a simple example:

[I]f a claim before amendment broadly claimed a metal filament for a light bulb but was later amended to avoid prior art and to specify metal A because of its longevity, the equivalent metal B, known in the prior art to function as a bulb filament, is not unforeseeable even through its longevity was unknown at the time of the amendment.

Id.

120. *Id.*

121. *Id.* at 1382.

the original broader claim.”¹²² The court recognized that prior art disclosed a non-magnetic sleeve.¹²³ More importantly, the court found that Dr. Stoll “recognized the possibility of using a non-magnetic material for the [device].”¹²⁴ Even the original patent disclosed that the shielding characteristics of the magnetic sleeve were only beneficial and not necessary to accomplish the invention.¹²⁵

C. Dissent

Judge Newman began her dissent by accusing the majority of eroding what was left of the doctrine of equivalents.¹²⁶ She analogized the majority’s opinion to the “complete bar” that was just recently overruled by the Supreme Court in *Festo IV*.¹²⁷ Specifically, she stated that the majority “create[ed] new and incorrect criterion for the measurement of foreseeability” when it held that “an existing structure need not be recognized or even recognizable, as an equivalent at the time of the patent application or amendment, in order to be ‘foreseeable’ if it is later used as an equivalent.”¹²⁸ Accordingly, Judge Newman agreed with *Festo* that determination of foreseeability required the applicant to know whether the equivalent satisfied the “triple identity” or the “insubstantial differences” tests at the time of the amendment.”¹²⁹

Judge Newman agreed that “the technological equivalency,” for purposes of the doctrine of equivalents, should be assessed at

122. *Id.*

123. *Id.*

124. *Id.* at 1382. The court thought so because the original did not require the sleeve to be made out of magnetizable material. *Id.* Furthermore, the applicant himself specified that whether the material for the sleeve was magnetizable was “a matter of ‘choice.’” *Id.* (quoting Pl.’s Pre-Trial Mem. at 91, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368 (Fed. Cir. 2007) (No. 05-1492) (“It is possible to use a magnetizable sleeve or a non-magnetizable sleeve and the device will work no matter which sleeve material is chosen The choice of the sleeve-material is merely a matter of personal selection.”)).

125. *Festo*, 493 F.3d at 1383.

126. *Id.* at 1383 (Newman, J., dissenting).

127. *Id.* at 1386.

128. *Id.* at 1383.

129. *Id.* at 1385.

infringement, while foreseeability should be determined at filing of the application or amendment.¹³⁰ However, Judge Newman thought that the district court committed error by analyzing foreseeability of the element in question using the information at the time of the infringement rather than using the information that was known at the time that the application was filed.¹³¹ She reasoned that, by agreeing with the district court, the majority found that the “aluminum alloy shield was retrospectively foreseeable at the time of the amendment because it later was used as an equivalent, although it was not known to be equivalent and would not have been deemed equivalent at the time of the amendment.”¹³² The majority, in Judge Newman’s mind, thus failed to correct the lower court, which had disregarded the fact that, at the time of the amendment, an aluminum alloy sleeve was not deemed to be an equivalent to the patented element with regards to the function that the equivalent was performing.¹³³ To Judge Newman, in a determination of foreseeability, one should consider the state of prior art, not subsequent developments in the art.¹³⁴

With respect to the application of the function/way/result test in the foreseeability determination, Judge Newman explained that according to the *Graver Tank* test, “an important factor is whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with the one that was,” and this factor should control in determining whether one skilled in the art would have treated an alleged equivalent foreseeable at the time of the amendment.¹³⁵ The inquiry should be determined using the triple identity test articulated in *Graver Tank*.¹³⁶

130. *Id.* at 1384.

131. *Festo*, 493 F.3d at 1384-85 (Newman, J., dissenting).

132. *Id.*

133. *Id.*

134. *Id.* Judge Newman stated that majority erred because it relied on “[respondent’s] later equivalent use of an aluminum alloy sleeve to prove that the non-magnetizable aluminum alloy was a foreseeable equivalent of a magnetizable metal,” at the time the original application was filed. *Id.*

135. *Id.* (quoting *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 609 (1950)).

136. *Festo*, 493 F.3d at 1385 (Newman, J., dissenting).

V. ANALYSIS

A. Emergence of a New Property of an Aluminum Sleeve, Unknown at the Time of the Amendment, Is One of the Reasons Why There Is a Split Between the Majority and the Dissent.

Festo, because of some extraordinary facts, has failed to clarify the proper application of the doctrine of equivalents and prosecution history estoppel. *Festo* did not involve a narrowing amendment that simply disclosed something that was known in the prior art. There was an extra wrinkle in the facts that caused a dilemma for the majority and the dissent. That wrinkle can be best demonstrated by the following hypothetical. Namely, one can imagine a situation, where an element present in the prior art, here, a non-magnetizable sleeve, is thought by one skilled in the art not to perform the specific function that the element in the patented device in question performs, here, the shielding of magnetic fields. That element present in the prior art is thus thought to have properties that are known at the time of amendment or filing. In *Festo*, the properties disclosed in the prior art were unrelated to magnetic shielding. Time passes and it turns out that what one skilled in the art thought about the properties of the prior art element, at the time of amendment, was wrong. In *Festo*, it turned out that a non-magnetizable sleeve was in fact able to shield magnetic fields. Should the patentee be precluded from recapturing that element, simply because it was present in the prior art, but was thought to exhibit different properties?

Before that question is answered in general, one thing has to be made clear: even if the above question was to be answered in the negative and the patentee was allowed to reclaim some subject matter because some of the properties were unknown at the time of the amendment, that rule still does not help *Festo* because the “unknown property” in question was not the function to be performed by the element in question, the sleeve. Even though the device in the patent contained a “‘small gap’ . . . between the piston and the driven member . . . so that the magnetic coupling force

[was] particularly strong,”¹³⁷ the original and independent claim 1 called only for the sleeve to be made of any material.¹³⁸ Thus, the sleeve was to “enclose the magnets,” not “shield the magnetic field,” and a “non-magnetizable sleeve” known in the prior art could perform that function of enclosing the magnets.¹³⁹ Furthermore, the amendment filed by Dr. Stoll did not explain magnetic qualities of the sleeve, and his response only disclosed and distinguished two “large gap” German patents.¹⁴⁰ This suggests that magnetic shielding was to be accomplished by the “small gap” in the patented device and not by the particular type of sleeve used to enclose the magnets. Thus, it was reasonable for the district court to conclude that “because the SMC magnetic leakage fields are ‘very small’ . . . little shielding is needed [from the sleeve].”¹⁴¹ Based on the prosecution history, one would conclude that the shielding was not the function intended to be performed by the sleeve; therefore, Festo should not be able to argue that it deserves to recapture the “magnetic sleeve” by arguing unforeseeability, even if courts allowed recapture in situations where a property of a particular element was unknown at the time of the amendment. In *Festo*, that property simply was not at issue since the time of filing.

What about a plaintiff who tries to recapture a disclaimed element because that element performs the very specific function that the patent requires? What if Festo specifically claimed and argued for a magnetic sleeve because of the property of shielding magnetic fields and not just enclosing the magnets? What should be the approach in that situation? Because this situation would involve performance of a specific function, i.e. magnetic shielding, to achieve a particular result, i.e. to maximize the magnetic coupling, the first thought that comes to mind is that under this scenario the foreseeability of interchangeable elements in the patented and allegedly infringing device should be analyzed using one of the tests for equivalency—the function/way/result, as Festo argued. Although the Federal Circuit found that to be incorrect,

137. *Id.* at 1371 (majority opinion).

138. *Id.* at 1382.

139. *Id.*

140. *Id.* at 1373.

141. *Id.* at 1384.

the positions of *Festo* and the dissent on that issue may not be unreasonable. This is because the Supreme Court, in *Festo IV*, failed to provide clear guidance on this issue.¹⁴² The next section will shed some light on this failure and explain that despite the ambiguity in the Supreme Court's test, the majority's decision provides the correct answer to the problem raised in *Festo*.

B. The Wording of the Supreme Court's Test, Articulated in Festo IV, May Have Caused the Split Between the Majority and the Dissent as to the Application of the Function/Way/Result Test.

In its opinion, the majority held that foreseeability of an equivalent does not require any of the tests for equivalency.¹⁴³ The majority reasoned that the test is specifically designed to determine whether a device is equivalent, but not to determine whether prosecution history estoppel applies as a result of a limiting amendment and furthermore, that application of the triple identity test in *Festo*-like cases would lead to the demise of the doctrine of equivalents because in most cases, at the time of the amendment, the applicant would not know that the device disclosed in the art would satisfy the triple identity test.¹⁴⁴ Thus, the device would always be unforeseeable to one skilled in the art and could therefore be recaptured using the Supreme Court's test in virtually all situations.¹⁴⁵ The dissent, on the other hand, argued that failure to apply the triple identity test in this situation would make the determination of foreseeability strictly mechanical; foreseeability would be a simple "matter of law" in situations when the alleged equivalent was disclosed in prior art, without any regard as to whether its equivalency was "unknown in fact."¹⁴⁶ In the dissenter's view, the majority's rule "further erodes the residue of

142. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002).

143. *Festo*, 493 F.3d at 1379.

144. *Id.* at 1380.

145. *Id.* Specifically, the court stated that "prosecution history estoppel would apply only if the applicant in adopting the narrowing amendment was aware or should have been aware that the equivalent would be an equivalent to the claimed feature for purposes of the invention as defined by the amended claim." *Id.* at 1380-81.

146. *See id.* at 1383-84 (Newman, J., dissenting).

the doctrine of equivalents, for its foreseeable result is to deprive amended claims of access to the doctrine of equivalents.”¹⁴⁷ Under the majority rule, an alleged device, when disclosed in the prior art, would be foreseeable even though the device would not be considered to be an equivalent by one of ordinary skill in the art.¹⁴⁸ As Judge Newman stated:

The [majority] now rules that the equivalency of the [alternative]. . . was foreseeable as a matter of law, because [it] previously was known although its technological equivalency was unknown. The panel majority holds that an equivalent is foreseeable if one skilled in the art would have known that the alternative existed in the field of art as defined by the original claim scope, even if the suitability of the alternative for the particular purposes defined by the amended claim scope was unknown.¹⁴⁹

Why such different approaches to the problem? Why does the dissent urge an application of the doctrine of equivalents under the facts of this case? As the majority and dissent correctly point out, it is a well-established principle that determination of equivalence takes place as of the time of infringement.¹⁵⁰ Foreseeability, on the other hand, for the purposes of prosecution history estoppel, as the Supreme Court’s test requires, is determined at the time of drafting an amendment of the claims.¹⁵¹ At this point, it seems that the boundaries of these two doctrines are fairly clear and that their

147. *Id.* at 1383.

148. *Id.*

149. *Festo*, 493 F.3d at 1383-84 (Newman, J., dissenting).

150. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 19 (1997). The court explicitly stated that “[i]nsofar as the question under the doctrine is whether an accused element is equivalent to a claimed element, the proper time for evaluating equivalency-and knowledge of interchangeability between elements-is at the time of infringement, not at the time the patent was issued.” *Id.*

151. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 740 (2002). The first prong in Supreme Court’s test explicitly states: “The equivalent may have been unforeseeable at the time of the application.” *Id.*

application would not cause problems, even though the application of one (doctrine of equivalents) necessarily encompasses application of the other (prosecution history estoppel).¹⁵² The problem in this case arises because the test articulated by the Supreme Court inadvertently suggests application of one of these doctrines in a manner different than urged by these well-established principles. Namely, by asking “whether the equivalent was foreseeable at the time of the amendment” the Supreme Court may inadvertently invite a determination of equivalency at the time of the application, or amendment, instead of time of infringement. The simple presence of the word “equivalent,” while perhaps necessary to indicate what needs to be done for the test to apply, may result in confusion. Although the Supreme Court may not have intended such a reading, Judge Newman and many practitioners did not think it an unreasonable interpretation of *Festo IV*.¹⁵³

However, while the presence of the word “equivalent” in the Supreme Court’s test may be explained, some of the Court’s statements complicate the issue even more. At one point in its decision, the Court states that “[t]he patentee, as the author of the claim language, may be expected to draft claims encompassing readily known equivalents.”¹⁵⁴ This statement explicitly requires the patentee to determine, and include in his patent application, “known equivalents” at the time of drafting the amendment, and thus determine equivalency of devices present in the pertinent art at the time of the application or amendment, contrary to what the rules of law may require. The problem seems to be compounded even more by failure of the Supreme Court to articulate explicitly the correct timing for determination of equivalency for the purposes of determining foreseeability at the time of the amendment. This, therefore, explains why the dissent calls for the

152. This is because prosecution history estoppel is a limitation on the extent to which the doctrine of equivalents can be applied.

153. Apparently, it is not only the dissent that swallows the bait in this case. Practitioners are also split whether the majority or the dissent had a better argument in this case. See, e.g., Patently-O, Further Limitations on Doctrine of Equivalents: Equivalent Foreseeable if Disclosed in Relevant Art, <http://www.patentlyo.com> (July 6, 2007).

154. *Festo*, 535 U.S. at 740.

application of the triple identity test—it simply follows the suggestion of that statement: “the patentee, as the author of the claim language, may be expected to draft claims encompassing readily known equivalents.”

C. *The Majority Got It Right*

Any reliance on this apparent ambiguity in *Festo IV* would be incorrect.¹⁵⁵ Although the Supreme Court did not explicitly articulate the timing for determining equivalency, it nevertheless followed, and did not disturb, the guidelines set by *Warner-Jenkinson*.¹⁵⁶ There, the Court did, in fact, hold that “[i]nsofar as the question under the doctrine of equivalents is whether an accused element is equivalent to a claimed element, the proper time for evaluating equivalency—and thus knowledge of interchangeability between elements—is at the time of infringement, not at the time the patent was issued.”¹⁵⁷ Such a rule was also articulated in many of the Federal Circuit’s own opinions involving prosecution history estoppel.¹⁵⁸ Thus, despite the instances where one might be tempted to read *Festo IV* to mean otherwise, namely, that equivalency for prosecution history estoppel purposes might be determined at the time of amendment, the Court’s decision follows its own precedent in *Warner-Jenkinson* by implicitly holding that equivalency still should be examined at the time of infringement.¹⁵⁹ The Federal Circuit’s

155. The ambiguity in the Supreme Court’s decision may have been unavoidable. Because the doctrine of equivalents and the prosecution history estoppel are interconnected, it’s hard to imagine a good substitute for the word “equivalent,” especially when the timing of the application of the two doctrines is different, as in this case.

156. See *Festo*, 535 U.S. at 733. The court stated that *Warner-Jenkinson* reaffirmed the doctrine. *Id.* The court follows this by affirming that the timing of determining equivalency is at the time of infringement and not at the time of patent application or amendment of the claims.

157. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 37 (1997).

158. See, e.g., *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 544 (Fed. Cir. 1998); *Hughes Aircraft Co. v. United States*, 140 F.3d 1470, 1475 (Fed. Cir. 1998).

159. The lack of explicit analysis in the Court’s decision is understandable because of the issues that were presented to the Court in the case, namely, the

majority in *Festo VII* is thus correct in holding that the function/way/result test does not apply in determining foreseeability. The triple identity applies only to equivalency, and that is determined at another time in the analysis—during infringement.¹⁶⁰

There is yet another reason why the function/way/result or the insubstantial differences test should not apply in determination of foreseeability despite any ambiguity in wording of any of the tests. Even though the doctrine of equivalents and prosecution history estoppel are applied in conjunction with one another, and are raised in the same cases, as one is a defense to another, they are still distinct doctrines that should be analyzed independently.¹⁶¹ Thus, in the determination of infringement, the initial burden of proof rests with the patentee to present a *prima facie* case of infringement.¹⁶² Once the patentee has met this burden, the burden shifts to the accused infringer to establish a defense.¹⁶³ Prosecution history estoppel is one possible defense.¹⁶⁴ However, the doctrine only applies once infringement under the doctrine of equivalents has been successfully raised. This is because one of the elements of a *prima facie* case of prosecution history estoppel is infringement of a claim, found under the doctrine of equivalents.¹⁶⁵ Thus, in cases invoking the application of the two doctrines, the doctrine of equivalents must be analyzed first—only then does prosecution history estoppel come into play. If equivalence is not proven, there is no infringement, and the

application and extent of the prosecution history estoppel and not the doctrine of equivalents.

160. See *Warner-Jenkinson*, 520 U.S. at 37.

161. I do not mean to say that the doctrines should be analyzed in isolation, but that the tests and rules applicable to one should not govern the other.

162. Cheri M. Taylor, *Claim Construction and Proving Infringement*, 910 PLI/PAT 13, 51 (2007).

163. *Id.*

164. Armando Irizarry, *Harmonizing Prosecution History Estoppel and the Doctrine of Equivalents in Patent Infringement Actions*, 5 TUL. J. TECH. & INTELL. PROP. 31, 35 (2003).

165. Taylor, *supra* note 156, at 54. The remaining two elements of the doctrine are: (2) a narrowing amendment made during prosecution, re-examination or re-issue of a claim; and (3) the narrowing amendment was made to satisfy any requirement of the Patent Act (i.e. overcome a prior art rejection).
Id.

prosecution history estoppel need not be established. What follows is that determination of foreseeability is also a moot issue.¹⁶⁶ On the other hand, if the *prima facie* case of equivalence is made out, i.e. equivalence is found at the time of infringement, prosecution history estoppel and foreseeability analysis are done using the information about equivalence that already has been determined. There is no need for a re-determining of equivalency at the time of infringement under foreseeability analysis.

This analysis establishes the correctness of the majority's holding that the function/way/result test, or for that matter, the insubstantial differences test, does not apply in determining foreseeability. If the majority held otherwise, as the dissent tried to argue, courts would attempt a re-analysis of equivalency at the time of infringement. Instead, equivalency at the time of infringement is first properly determined. That information is then used in the analysis of foreseeability at the time of the narrowing amendment. Had the intent of the Supreme Court been otherwise—had the Supreme Court meant to allow for determination of equivalency at the time when foreseeability is also determined as the dissent suggests—the majority would have explicitly said so, because such a rule would completely revamp the doctrine of equivalents. Instead, the Court followed the well-established cases in the arena.

VI. IMPACT

Because *Festo VII* is still a very recent opinion, it is unclear what effect it will have on the doctrine of equivalents and prosecution history estoppel jurisprudence. The decision appears as a broad application of foreseeability because of the presumption that what was present in the prior art should have been foreseeable to the patentee at the time of the amendment.¹⁶⁷ Thus, it is conceivable that, as some practitioners suspected, the “foreseeable” exception to prosecution history estoppel will apply only to truly pioneering inventions, meaning that it will only be a

166. Once there is no infringement, both prosecution history estoppel and foreseeability exception, or any exceptions for that matter, are moot.

167. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1378 (Fed. Cir. 2007).

slight upgrade over the “complete bar.”¹⁶⁸ Chances are, however, that *Festo VII* will not cause a great turmoil, particularly because it is still far less radical than the “complete bar” in *Festo III*.¹⁶⁹ As this section will demonstrate, *Festo III* had much less impact on the outcome of court cases than initially anticipated.¹⁷⁰ It is likely that the latest Federal Circuit’s decision will follow the same path.

A. Brief Presentation on the Immediate Effects of Festo III

In *Festo III*, the Federal Circuit held that when a patentee enters a narrowing amendment with respect to his claims, he creates a “complete bar” with respect to the subject matter of the narrowed claims; he gives up all of the equivalents with respect to the amended element.¹⁷¹ Certainly, that decision can be viewed as decreasing the chances of the patentees to succeed in infringement litigation involving the application of the prosecution history estoppel because, due to a narrowing amendment for the purposes of patentability, the patentee closes the door to the doctrine of equivalents and must rely strictly on literal infringement. Interestingly, however, in the years after *Festo III*, patentees did not record a diminished rate of success in litigating cases involving the prosecution history estoppel.¹⁷² In fact, “patentees did better under [seemingly] less-patent friendly rules.”¹⁷³ Specifically, during the “pro-patentee”¹⁷⁴ period before *Festo III*, patentees’

168. Benassi, *supra* note 14, at 66 (“If the Federal Circuit takes the broad view . . . then it is likely that an unforeseeable equivalent will be rare, and may only apply an “after arising equivalent” to a truly pioneering invention.”).

169. Even if one argues that the foreseeability exception will only apply to truly pioneering inventions, it is still not a complete bar on equivalents.

170. Allison & Lemley, *supra* note 9, at 957.

171. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 569 (Fed. Cir. 2000). In addition, the Federal Circuit also held that “voluntary amendments are treated in the same way for purpose of prosecution history estoppel” and that “unexplained amendments are not entitled to any range of equivalents.” *Id.* at 558.

172. Allison & Lemley, *supra* note 9, at 957.

173. *Id.*

174. Before the complete bar decision, prosecution history estoppel was a flexible doctrine. It remained flexible even after *Warner-Jenkinson* introduced its presumption that unexplained amendments are presumptively made for purposes of patentability.

success rate in prosecution estoppel cases involving amended claims was a mere 12.5%.¹⁷⁵ That success rate went up to 21.2% in the period after *Festo III* but prior to when *Festo IV* “relaxed” the rules.¹⁷⁶ The low numbers of patentee success in these cases involving prosecution history estoppel, and cases involving strictly the application of the doctrine of equivalents¹⁷⁷ only suggest that the doctrine of equivalents “was already near death by the 1990s,” far earlier than when *Festo III* was handed down.¹⁷⁸ That the doctrine of equivalents was “near death” may or may not be true, but it appears that the success rate of patentees applying prosecution history estoppel was growing prior to (and continued to grow even faster after) *Festo IV*.¹⁷⁹ Specifically, patentees’ success rates between February 27, 2004 and August 31, 2005 reached 42.1%.¹⁸⁰ When district court cases are excluded and only

175. Allison & Lemley, *supra* note 9, at 968.

176. *Id.* Generally the district courts were more favorable to patentees than the Federal Circuit. *Id.* at 967. However, even the Federal Circuit became more patentee friendly after the “complete bar” decision. *See id.* Patentees’ success rate almost doubled from 8.8% to 17.2%. *Id.* at 969.

177. The success rate for patentees strictly with doctrine of equivalents issues hovered around 27.6% before the “complete bar” and 21.7% in the years following it. *Id.* at 966. These numbers, as compared with the numbers in prosecution history estoppel, actually decreased. *See id.* at 967.

178. *Id.* at 958. The authors suggested that the emergence of the Markman hearings started the demise of the doctrine of equivalents:

Once courts were construing claims as a matter of law pre-trial, and finding themselves in a position to resolve virtually all infringement issues on summary judgment, they were naturally inclined to decide the doctrine of equivalents issues too. And a court that has rejected a literal infringement argument – the only kind of court likely to spend much time thinking about equivalents issues pre-trial – is unlikely to undo the work of claim construction by sending the issue of infringement by equivalents to the jury.

Id. This point is well taken; however, one should not forget that ever since the Supreme Court’s Markman decision and even before that opinion, the Federal Circuit has reversed Markman determination at an alarmingly high rate, thus diminishing the effect of bias that district court judges may have developed due to implementation of the hearings. *See id.*

179. *Id.* at 968.

180. *Id.* The authors of this study do not consider this growth in the success rate to be significant; however, despite the fact that in some areas the numbers

Federal Circuit dispositions are considered, that number grows to 47.4%.¹⁸¹ Thus, while it appears that *Festo IV* breathed new life into the doctrine of equivalents by relaxing the rigid standards of *Festo III*, *Festo III* itself was not the reason of the doctrine's earlier downfall.

B. Impact of *Festo*

All of this suggests that, barring a Supreme Court reconsideration of *Festo*, *Festo VII* will not have an effect on the way practitioners approach their cases. Opponents of the decision can argue, as the dissent did in this case, that this decision "further erodes the residue of the doctrine of equivalents, for its foreseeable result is to deprive amended claims of access to the doctrine of equivalents."¹⁸² These opponents can argue that foreseeability will be deprived of any factual analysis and become a mechanical and automatic application.¹⁸³ This argument is erroneous for several reasons. First, the Federal Circuit did not hold that the presence of the alleged device in the art at the time of the amendment is conclusive of foreseeability. Instead, it ruled that a court should engage in objective analysis, using a variety of factors, to make that determination of foreseeability.¹⁸⁴ This is what the district court specifically did in this case; the court considered whether the use of a "magnetizable sleeve" was foreseeable to one of ordinary skill in the art and ruled on that issue against *Festo*.¹⁸⁵ Thus,

they provided suggested a doubling of patentee's success rate. *Id*

181. Allison & Lemley, *supra* note 9, at 969.

182. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 493 F.3d 1368, 1383 (Fed. Cir. 2007).

183. *Id.* at 1384.

184. The court explained:

Because we cannot anticipate all of the circumstances in which a patentee might rebut the presumption of surrender, we believe that discussion of the relevant factors encompassed by each of the rebuttal criteria is best left to development on a case-by-case basis. However, we provide the following general guidance, which we apply to the patents in suit below, regarding the application of the three rebuttal criteria.

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 344 F.3d 1359, 1368-69 (Fed. Cir. 2003).

185. *Festo*, 493 F.3d at 1376. The district court concluded that the

contrary to the dissenting opinion, the foreseeability presumption is not a mechanical one, and an alleged equivalent will not be ruled to be foreseeable just because it can be found in the prior art. The court will go through the foreseeability analysis using a variety of factors as it did in the case at bar.

Second, the Federal Circuit's holding that an equivalent that is present in prior art "should have been foreseeable" is in accord with earlier controlling decisions; it does not change anything that the Supreme Court stated or any set principles that were deeply entrenched in Federal Circuit practice.¹⁸⁶ Thus, the Federal Circuit in *Festo VII* did nothing to prompt critiques that its holding in this case would have any particular effect on the doctrine of equivalents. If there was to be such effect, it would have happened long before *Festo VII*, particularly after *Festo III*. However, nothing to that effect happened. In fact, quite the opposite has occurred as patentees have enjoyed greater success following *Festo III*.

VII. PUBLIC POLICY V. *FESTO*

The underlying public policy considerations of the doctrine of equivalents and prosecution history estoppel are yet other reasons that support the Federal Circuit's holding that neither applies in determination of foreseeability. This is despite the fact that both of these doctrines protect completely opposite interests during the patent process. Whereas the doctrine of equivalents protects the patentee by "prevent[ing] the imitation of an otherwise patented invention where insubstantial changes have been made to circumvent the patent protection" where literal infringement does

"aluminum sleeve was foreseeable because containing the magnetic leakage fields was not necessary to serve the purposes of the invention." *Id.*

186. The Supreme Court in *Festo* explicitly held that "when . . . the patentee originally claimed the subject matter alleged to infringe but then narrowed the claim in response to a rejection, he may not argue that the surrendered territory comprised unforeseen subject matter that should be deemed equivalent to the literal claims of the issued patent." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733-34 (2002). Similarly, the Federal Circuit has held frequently that "if the alleged equivalent were known in the prior art in the field of the invention, it certainly should have been foreseeable at the time of the amendment." *Festo*, 493 F.3d at 1377.

not apply,¹⁸⁷ the prosecution history estoppel protects “other players in the marketplace [who] are entitled to rely on the record made in the Patent Office in determining the meaning and scope of the patent.”¹⁸⁸ Courts, however, resolve the apparent conflict between the interests involved and apply the two doctrines after engaging in equitable balancing based on the facts of the case in question.¹⁸⁹

Festo VII will not change this analysis. Courts should proceed in their analysis in the same fashion and under the same rules of law. Nothing has changed in that analysis—there still has to be a narrowing amendment that excludes from the claims subject matter, known in the prior art, that is later reclaimed as an equivalent. There is nothing unfair in charging the patentee with the burden of knowing what is present in the prior art and what can be used as a substitute for the element in question, even if some of its properties are still unknown. The burden is considerably lessened by the fact that it only applies when the patentee tries to recapture the very same element, which was originally present in his application and which was later disclaimed by him. A patentee should bear the risk of having full knowledge of the qualities of all of the elements in his claims before he decides to disclaim them. By disclaiming these elements, the patentee, and only the patentee, is making a conscious decision about the coverage of his patent. The public, having only the file wrapper to analyze, should not bear the burden of answering these questions for the patentee.

187. Clark, *supra* note 10, at 366. That principle was voiced by the Supreme Court from the very first time that it addressed the doctrine in cases. See, e.g., *Winans v. Denmead*, 56 U.S. 330, 343 (1853) (“The exclusive right to the thing patented is not secured, if the public are at liberty to make substantial copies of it, varying its form or proportions”); *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950) (“The essence of the doctrine is that one may not practice a fraud on a patent”); *Festo*, 535 U.S. 722, 723 (2002) (explaining that the doctrine of equivalents ensures appropriate incentives for innovation).

188. *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1254 (Fed. Cir. 2000) (quoting *Lemelson v. Gen. Mills, Inc.*, 968 F.2d 1202, 1208 (Fed. Cir. 1992)).

189. See *Black & Decker, Inc v. Hoover Serv. Ctr.*, 886 F.2d 1285, 1295 (Fed. Cir. 1989) (quoting *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 871 n.7 (Fed. Cir. 1985)).

VIII. CONCLUSION

After 19 years of litigation, two visits to the Supreme Court, two *en banc* decisions by the Federal Circuit, and after setting new and reaffirming old precedent with respect to several issues concerning the doctrine of equivalents and prosecution history estoppel jurisprudence, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.* seems to have been finally decided. Although still appealable to the Supreme Court, *Festo* seems to have reached the end of its road because the Federal Circuit simply followed the directions that it was given. Both the Federal Circuit's careful adherence to the Supreme Court's directions and the underlying public policy should prevent the Federal Circuit's decision from being disrupted again. The final question that needed answering concerned foreseeability and what necessarily comes with it, specifically with regard to timing. That question has been answered.

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